

Att'y Ref. No.: 003-065

U.S. App. No.: 10/621,379

IN THE CLAIMS:

Kindly rewrite Claims 1-17 as follows:

[Page 5 of 15]

Att'y Ref. No.: 003-065

U.S. App. No.: 10/621,379

1. (Currently Amended) A vortex generator in a flow duct to which a fluid medium is to be applied, comprising:
 - a flow duct having a duct wall and defining a direction of main flow;
 - a vortex generator having surfaces extending in the direction of the main flow and surfaces around which flow occurs freely, at least two surfaces forming side surfaces supported on the duct wall, which side surfaces converge towards each other in the flow direction and meet at an acute angle α in a common edge that forms a downstream edge of the vortex generator, at least one surface forming a top surface that extends away from the duct wall in the flow direction at an acute angle θ and forms trailing edges together with the side surfaces; and
 - at least one outlet opening configured and oriented relative to said vortex generator surfaces for a targeted introduction of to introduce a targeted secondary flow into the core flow of the forming a wake vortex formed by said vortex generator surfaces when said fluid medium flows through said flow duct.
2. (Previously Presented) A vortex generator according to Claim 1, wherein the at least one outlet opening is located in the area of the side surfaces.
3. (Previously Presented) A vortex generator according to Claim 2, wherein the at least one outlet opening is located at half the chord length immediately below the trailing edge.
4. (Previously Presented) A vortex generator according to Claim 2, wherein at least one side surface comprises a plurality of outlet openings of a different geometrical configuration.
5. (Previously Presented) A vortex generator according to Claim 1, wherein the at least one outlet opening is located at the downstream edge of the vortex generator.
6. (Previously Presented) A vortex generator according to Claim 5, wherein the downstream edge has a plurality of outlet openings.

[Page 6 of 15]

Att'y Ref. No.: 003-065

U.S. App. No.: 10/621,379

7. (Previously Presented) A vortex generator according to Claim 6, wherein the downstream edge has a plurality of outlet openings with a different geometrical configuration.
8. (Previously Presented) A vortex generator according to Claim 1, wherein the at least one outlet opening comprises a circular cross-section.
9. (Previously Presented) A vortex generator according to Claim 1, wherein the at least one outlet opening comprises a slit shape.
10. (Previously Presented) A method for controlling the wake flow of a vortex generator in a flow duct to which a fluid medium is applied, which vortex generator has essentially three surfaces extending in the flow direction and around which surfaces flow occurs freely, of which surfaces at least two surfaces form side surfaces supported on the duct wall, which side surfaces converge towards each other in the flow direction and meet at an acute angle α in a common edge, and of which at least one surface forms a top surface that in the flow direction extends away from the duct wall at an acute angle θ and forms trailing edges together with the side surfaces, the method comprising:
flowing fluid to form a pair of countercurrent vortices downstream from the trailing edges, the vortex axes of said vortices being in the axis of the main flow; and
introducing an axial impulse in the zone of the core flow of the forming wake vortices at least approximately in the direction of the main flow.
11. (Previously Presented) A method according to Claim 10, comprising:
introducing a secondary flow into the core flow of the wake vortex in a targeted manner.
12. (Previously Presented) A method according to Claim 11, wherein introducing

[Page 7 of 15]

Att'y Ref. No.: 003-065

U.S. App. No.: 10/621,379

comprises introducing a secondary fluid into the vortex core flow via outlet openings on the vortex generator.

13. (Previously Presented) A method according to Claim 12, wherein introducing comprises variably adjustably introducing the throughput of the secondary medium.

14. (Previously Presented) A method according to Claim 11, wherein the secondary medium is a component to be mixed into the main flow.

15. (Previously Presented) A method according to Claim 11, wherein the mass portion of the secondary flow in relation to the main flow is 0.1% to 5%.

16. (Previously Presented) A vortex generator according to Claim 4, wherein the different geometrical configuration comprises different orientation, different throughput, or both.

17. (Previously Presented) A method in accordance with Claim 15, wherein the mass portion of the secondary flow in relation to the main flow is 0.5% to 1.5%.